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REMARKS/ARGUMENTS

Claims 1-16, 18-20, 22-37, and 55-58 are pending in this application. By this Amendment, Applicant AMENDS Claims 1 and 4-9 and CANCELS Claims 17, 21, and 38-54.

Applicant's counsel greatly appreciates the courtesies extended by the Examiner in the personal interview of January 10, 2006. Applicant's counsel and the Examiner discussed possible amendments to overcome the prior art rejections of Applicant's Claim 1.

Applicants affirm election of claims 1-16, 18-20, 22-37, and 55-58. Further, Applicants reserve the right to file a Divisional Application to pursue claims 38-54.

In box no. 10) on the Office Action Summary, Form PTOL-326, of the outstanding Office Action, the Examiner failed to indicate whether the Drawings filed on December 15, 2003 were accepted or objected to by the Examiner. Applicant believes that the Examiner intended to indicate that the Drawings were accepted by the Examiner because the Examiner did not object to the Drawings anywhere in the outstanding Office Action. Accordingly, Applicant respectfully requests that the Examiner indicate that the Drawings have been accepted in the next Office Action.

Applicant greatly appreciates the Examiner's allowance of Claims 2, 3, 5, 7, 9, 11, 13, 18-20, 23, 26, 27, 30, 31, 35-37, 57, and 58.

The Examiner rejected Claims 17, 21, 32, and 33 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite.

With respect to Claims 17 and 21, Applicant canceled Claims 17 and 21.

With respect to Claims 32 and 33, in the first full paragraph of page 3 of the outstanding Office Action, the Examiner alleged that Claims 32 and 33 are indefinite because the feature of "domain diameters of crystal domains of the semiconductor layer are about 2 μm to about 10 μm " recited in Applicant's Claims 32 and 33 is not well understood.

The paragraph bridging pages 47 and 48 of the originally filed Specification states, "The term 'crystal domain' as used herein refers to a region of substantially the same crystal orientation. ... Thus, when a catalyst element is used, the crystal domains

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(regions each having a substantially uniform orientation) of the crystalline semiconductor film of the semiconductor layer typically have domain diameters of about 2 μm to about 10 μm ."

Thus, Applicant respectfully submits that Claims 32 and 33 are definite because the feature of "domain diameters of crystal domains of the semiconductor layer are about 2 μm to about 10 μm " recited in Applicant's Claims 32 and 33 would be easily understood by one of ordinary skill in the art.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 17, 21, 32, and 33 under 35 U.S.C. § 112, second paragraph.

The Examiner rejected Claims 1, 4, 6, 8, 10, 14-17, 22, 28, 29, 55, and 56 under 35 U.S.C. § 102(b) as being anticipated by Yamaguchi et al. (US 2002/0102823). The Examiner rejected Claims 1, 4, 6, 8, 10, 22, 34, 55, and 56 under 35 U.S.C. § 102(b) as being anticipated by Inoue et al. (US 5,693,959). The Examiner rejected Claims 1, 4, 6, 12, and 55 under 35 U.S.C. § 102(e) as being anticipated by Takahashi et al. (US 2003/0080384). The Examiner rejected Claims 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Yamaguchi et al. view of Yamazaki et al. (US 2002/0100937). As noted above, Applicant canceled Claims 17 and 21. Applicant respectfully traverses the rejection of Claims 1, 4, 6, 8, 10, 12, 14-16, 22, 24, 25, 28, 29, 32-34, 55, and 56.

Applicant amended Claim 1 to recite:

A semiconductor device, comprising:
a thin film transistor including a semiconductor layer that includes a channel region;
a source region and a drain region;
a gate insulating film provided on the semiconductor layer;
and
a gate electrode for controlling a conductivity of the channel region;
wherein
a surface of the semiconductor layer includes a protruding portion;
a cross-section of the gate electrode includes first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode; and
a side surface inclination angle of the gate electrode is larger than an inclination angle of the protruding portion of the semiconductor layer.
(emphasis added)

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In section no. 6 on page 3 of the outstanding Office Action, the Examiner alleged that **Fig. 4** of Yamaguchi et al. teaches each feature of Applicant's originally filed Claim 1.

Applicant amended Claim 1 to recite the feature of "a cross-section of the gate electrode includes first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode."

The gate electrode **6** shown in **Fig. 4** of Yamaguchi et al. has a rectangular cross-section with each pair of opposing sides that are parallel to each other and does **NOT** have a cross-section with first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode as recited in Applicant's Claim 1. Thus, Applicant respectfully submits that Yamaguchi et al. fails to teach or suggest the feature of "a cross-section of the gate electrode includes first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode" as recited in Applicant's Claim 1.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. § 102(b) as being anticipated by Yamaguchi et al.

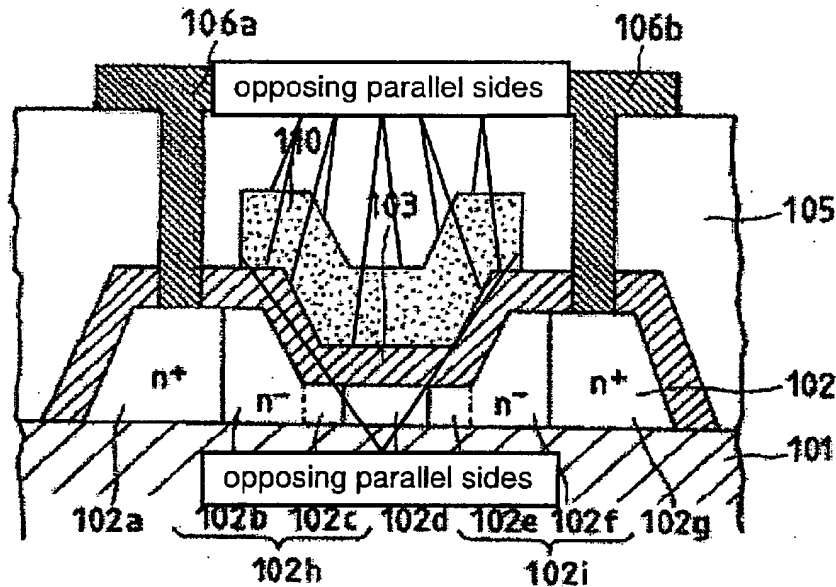
In section no. 7 on page 5 of the outstanding Office Action, the Examiner alleged that Inoue et al. teaches each feature recited in Applicant's Claim 1.

As noted above, Applicant amended Claim 1 to recite the feature of "a cross-section of the gate electrode includes first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode."

In each of **Figs. 1, 2c-e, 4-6, 9, 10a, and 10b** of Inoue et al., Inoue et al. teaches that each of the gate electrodes **104, 104a, 104b, 110, 604, 610, and 903** has a cross-section with each pair of opposing sides that are parallel to each other and does **NOT** have a cross-section with first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate

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electrode as recited in Applicant's Claim 1. As an example, Applicant provides a marked-up **Fig. 6** of Inoue et al.:



As can be seen in the above marked-up **Fig. 6** of Inoue et al., each side of the cross-section of the gate electrode **110** is parallel to an opposing side of the cross-section of the gate electrode **110**. That is, no side of the cross-section of the gate electrode **110** is not parallel to any other side of the cross-section of the gate electrode **110**.

Thus, Applicant respectfully submits that Inoue et al. fails to teach or suggest the feature of "a cross-section of the gate electrode includes first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode" as recited in Applicant's Claim 1.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. § 102(b) as being anticipated by Inoue et al.

In section no. 8 on page 6 of the outstanding Office Action, the Examiner alleged that **Fig. 5(c)** of Takahashi et al. teaches each feature recited in Applicant's Claim 1.

As noted above, Applicant amended Claim 1 to recite the feature of "a cross-section of the gate electrode includes first and second opposing sides that are parallel

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to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode.”

The gate electrode **70** shown in **Fig. 5(c)** of Takahashi et al. has a rectangular cross-section with each pair of opposing sides that are parallel to each other and does **NOT** have a cross-section with first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode as recited in Applicant's Claim 1.

Figs. 14C and 15C of Takahashi et al. show the only other embodiments of Takahashi et al. with gate electrodes **200** and **208** disposed on gate insulating films **199** and **207**, as required by Applicant's Claim 1. However, the gate electrodes **200** and **208** of **Figs. 14C and 15C** of Takahashi et al. also have a rectangular cross-section with each pair of opposing sides that are parallel to each other and do **NOT** have a cross-section with first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode as recited in Applicant's Claim 1.

Thus, Applicant respectfully submits that Takahashi et al. fails to teach or suggest the feature of “a cross-section of the gate electrode includes first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode” in combination with the other features recited in Applicant's Claim 1.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. § 102(e) as being anticipated by Takahashi et al.

The Examiner relied upon Yamazaki et al. to allegedly cure various deficiencies in Yamaguchi et al. Applicant respectfully submits that Yamazaki et al. fails to teach or suggest the feature of “a cross-section of the gate electrode includes first and second opposing sides that are parallel to each other and a third side that is not parallel to any other side of the cross-section of the gate electrode” as recited in Applicant's Claim 1.

Accordingly, Applicant respectfully submits that the prior art of record, applied alone or in combination, fails to teach or suggest the unique combination and

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arrangement of elements recited in Claim 1 of the present application. Claims 4, 6, 8, 10, 12, 14-16, 22, 24, 25, 28, 29, 32-34, 55, and 56 depend upon Claim 1 and are therefore allowable for at least the reasons that Claim 1 is allowable.


In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

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Respectfully submitted,



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